Abstract

In order to discriminate between ethylene-regulated and ethylene-independent ripening pathways in climacteric fruit, we analyzed different features of the ripening process in wild-type and AS3 transgenic melons, the latter showing extreme inhibition of ethylene production. The transgenic melons took an average of 10 days longer than wild-type melons to reach the harvesting stage, which resulted in the accumulation of larger amounts of soluble solids. The transgenic fruit also remained firmer and showed higher levels of chlorophyll and titratable acidity compared to wild-type fruit. However, the carotenoid content of the wild-type and transgenic fruit remained similar throughout the ripening process.